

**REMARKS**

A terminal disclaimer is filed with this amendment to respond to and obviate the rejection on double patenting of the claims, as suggested by the Examiner. Claim 24 has been amended to overcome the rejection made in paragraph 3 on the basis of indefiniteness under 35 U.S.C. 112. Favorable consideration of the application and the claims as amended is respectfully requested in view of the following arguments.

Claims 15-17, 24 and 25 are pending in this application. These claims were first rejected on the ground of statutory non-obviousness type double patenting as being unpatentable over Claims 1-19 of Applicant's U.S. Patent 6,685,468. A terminal disclaimer is filed with this amendment to overcome this rejection, and it is requested that the rejection be withdrawn.

Claim 24 was rejected under 35 U.S.C. 112 as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. More particularly, the Examiner states that the claim language is inconsistent because the preamble includes a body of metal and the first step in this method claim refers to the appliance body to be of ceramic, metal or plastic. This claim has been amended to also have the preamble define the body of ceramic, metal or plastic to provide a consistency between the preamble and the first step of the claim. Accordingly, it is submitted that this rejection has been overcome, and it is requested that it be withdrawn.

Claims 15-17 and 24 were rejected as being anticipated by Collito on the basis that it discloses an orthodontic appliance and method of making the appliance having a light-

permeable polymer bonding base molded onto the lingual side of the body of the bracket such that at least a part of the body is embedded in the base and includes a peripheral lip. The support for this statement in Collito is stated to be on line 23 of Column 4. For reasons stated below, it is submitted that Collito does not teach or disclose a part of the appliance body embedded in the base such as to include a peripheral lip. The rejection goes on to assert that the base includes material of epoxy resin and refers to line 30 of Column 6. Also, for reasons stated below, it is submitted that this assertion by the Examiner is incorrect.

The Collito patent discloses a rather large number of embodiments in a total of 52 figures. In those embodiments where a base is first attached to the body of the appliance the base is clearly described as being made of a flexible resilient material such as a natural or synthetic rubber or a suitable plastic such as a thermoplastic or thermosetting resin, as stated in lines 6-8 of Column 4. Contrary to the Examiner's assertion that the base includes material of an epoxy resin, which is referred to in Column 6, Collito discloses the use of an epoxy resin "sealer," not a base or backing of epoxy resin. This sealing agent or sealer is optionally used to isolate the adhesive from the oral environment (Column 6). The sealing agent is identified in the figures by the numeral 44 and is seen in Fig. 13. Although the legend 44 is used in Fig. 14 and appears to designate the resilient base or backing member 14, there is no support in the written disclosure that the sealing agent 44 is the same as the resilient backing 14. It is rather clear in Column 6 that the sealing agent 44 is applied to the backing 14, even though the description states that the sealing agent 44 is smoothed around the edges of the backing, so as to isolate completely the adhesive film 24 from the conditions within the oral cavity. Thus,

what apparently is depicted in Fig. 14 and described in Fig. 6 is the application of the sealing agent 44 over and around the edges of the backing member 14. Nevertheless, it is also very clear in Column 6 that the sealing agent is intended to isolate the adhesive used to bond the bracket with a resilient backing 14 to a tooth to improve the tenaciousness of the bond.

Collito clearly does not teach the use of a light or heat cured polymer resin to form a base for the bracket body. As suggested in Column 7, lines 20-32, of Collito, the elimination of backing 14 may be possible where thicker adhesive layers are used when bonding a bracket body to a tooth. However, in such a situation it is pointed out that the advantages of resiliency are lost when using such rigid appliances. In any event, this version, as shown in Figs. 19 and 20 of Collito, is a "no base" version unlike the present invention. It is provided to the orthodontist without a base. As set forth in Claim 15 of this application, it is limited to an orthodontic appliance for shipment to a user that includes a metal appliance body and a light-permeable heat or light curable bonding base molded onto the lingual side of the body. Where Collito discloses the use of a resilient backing member applied and mounted on a bracket body and for shipment to a user, that base is only disclosed as intended to be one of a flexible resilient material such as rubber or plastic. The particular type of plastic is defined as being a thermosetting or thermoplastic resin, and such a backing member or base, even though it could be molded onto the bracket, does not include a "peripheral lip" overlapping a part of the appliance body, as set forth in the claims.

It should be appreciated that as described in the specification and noted in the initial paragraph of the description as well as the abstract that the appliance of the present invention is

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one for shipment to the user and for bondable mounting on a tooth where it includes the polymer resin bonding base molded to the lingual side of the appliance body. More specifically, the resin base on the appliance body, as set forth in the claims and noted in the specification in lines 13-32 on page 12, is molded such that the lingual side of the appliance body is embedded to provide a peripheral lip overlapping a part of the body for assuring that this base is properly bonded to the appliance body to withstand the forces applied to the appliance body during treatment of the patient by the main and/or auxiliary archwires used during the treatment. Accordingly, the appliance of the invention minimizes any failure possibilities of the bonding of the appliance on a tooth during treatment by enhancing the bond strength of the appliance to a tooth.

Inasmuch as Collito does not teach a base having a light-permeable heat or light cured polymer resin and a base molded onto an appliance body that includes a peripheral lip overlapping a part of the appliance body, it does not anticipate the orthodontic appliance for shipment to a user or the method of making same, as required in Claims 15-17 and 24. Indeed, the backing member 14, of the Collito appliance is not disclosed as being made from a light-cured adhesive, nor is there any reference in Collito to the use of a light-curable adhesive for bonding a bracket to a tooth. It is submitted that rejection of Claims 15-17 and 24 as anticipated by Collito be withdrawn.


Claim 25 was rejected as being unpatentable under 35 U.S.C. 103 over Collito in view of Fujita on the basis that Fujita by disclosing an opening for supporting an auxiliary wire can be combined with Collito to make obvious to one having ordinary skill in the art the appliance

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of Collito with an opening for an auxiliary appliance. For reasons given above, it is submitted that Claim 25 is patentable on the basis that Collito cannot properly stand as a primary reference because it does not teach a bracket having a base of a heat or light-cured polymer resin. Secondly, Claim 25 defines the opening as being formed by a groove in the appliance body and the molded base. Even though Fujita relates to a lingual bracket, it only discloses a bracket having an opening 10 formed by a groove in the bracket body. It does not disclose a bracket and base combination where the opening is defined by a groove in the appliance body and a groove in the molded base. Accordingly, it is submitted that Claim 25 is patentable over Collito and Fujita, and it should be allowed.

An earnest endeavor has been made to place this application in condition for prompt allowance, and in the absence of more pertinent art, such action is courteously solicited.

Respectfully submitted,

  
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